4. Alignment of Expert Mouse Clock

After successful hardware and software installation, LED of **Expert Mouse Clock** shines green and flashes red once per second. If the LED does not shine, please check the connection of the device. Irregular blinking indicates a bad reception or a disturbance of the signal. Monitors or other electrical devices can be the reason. In these cases change the position of

Fig. 2: Diffusion of the DCF77 signal

Since the time signal spreads out in circles from the sender in Frankfurt a. M., you will get best signal reception if **Expert Mouse Clock** is placed as shown in the image.

the module. Also rotating **Expert Mouse Clock** can improve signal reception significantly (compare Fig. 2). After having found an optimum position, fixate **Expert Mouse Clock**. The PC clock will be synchronised after two or three minutes.

5. Support

Our Windows software contains a help file. There you find detailed information on features and operations of **Expert Mouse Clock** as well as a FAQ list. Under gude.info/nc/support/downloads the latest driver and software of **Expert Mouse Clock** is available for download. For further questions, please have a look at gude.info/wiki or feel free to contact our service team.

6. EU Declaration of Conformity

Good. Great. GUDE.

Manual

Expert Mouse Clock 0100, 102, 0107, 0108, 0131

DCF77 Time Receivers for the PC

v.0.4

Dear customer,

thank you for choosing a GUDE product All our devices are developed and manufactured in Germany in order to meet our customers' expectations towards reliable IT infrastructure.

made in Germany

Expert Mouse Clock Series empowers your PC to dispose of the exact time. All devices are suitable for operations in buildings and weatherproof locations. In particular, **Expert Mouse Clock 102** is waterproof (IP68) and hence qualified for outdoor usage.

1. Hardware Installation under Windows*

1.1 Expert Mouse Clock 0100, 0102, 0131 (RS232)

Connect **Expert Mouse Clock** to the 9-pole serial of the PC. Set the baud rate to 50 Baud. For **Expert Mouse Clock 0131**, please connect the external antenna to the BNC interface. For 25-pole serial interfaces, please deploy a commonly used adapter to get **Expert Mouse Clock** connected.

1.2 Expert Mouse Clock 0107, 0108 (USB)

Insert the CD ROM *Drivers, Tools & Manuals* into the CD drive of the PC or download the latest driver version from gude.info/nc/support/downloads. Connect **Expert Mouse Clock** to a USB port of the PC. Now Windows will automatically install the USB driver and the driver for the virtual serial interface. The driver installation can also be realized manually by using the Windows device manager. For **Expert Mouse Clock 0108**, please connect the external antenna to the BNC interface.

2. Operations under Windows*

2.1 Software Installation

The Windows software **WinClk** converts the received time signal into UTC time and synchronizes the internal PC time (system time) at regular intervals. The displayed time results from operating system's settings (time zone, daylight saving time changes).

ⓘ For **Expert Mouse Clock 0107 / 0108**, the corresponding USB driver has to be installed **before** installing the Windows software (see 1.2).

Insert the CD ROM *Drivers, Tools & Manuals* into the CD drive of the PC or download the latest driver version from gude.info/nc/support/downloads.

Follow the screen dialogue of the installation program.

* Windows Server 2003/2008/2012 (x32/x64), Windows XP (x32), Vista, 7/8/10 (x32/x64)

2.2 Display Elements in the Software

❶ Receive
State: Current receive status of radio time system
Received signal quality: Displayed in percent
Last correct DCF time: Moment of the last correctly transmitted time value
Interface: Interfaces used (USB or COM)

❷ Bitsequence
The received bits (0,1) of the last two minutes are displayed here (previous and current minute). Both rows are completely filled with bits. The bit's meaning is displayed under *Information*.

❸ Time shift
A constant offset to the received time signal can be set here. Normally, this option should be deactivated. Before using this option, please read the corresponding explanation in the software's help menu.

❹ max. offset to PC
If this option is enabled, the received time is compared to the current PC time. Is the deviation greater than the set value (example in Fig. 1: 60 minutes), the PC time will not be synchronized. Please also read the comments in the software's help menu.
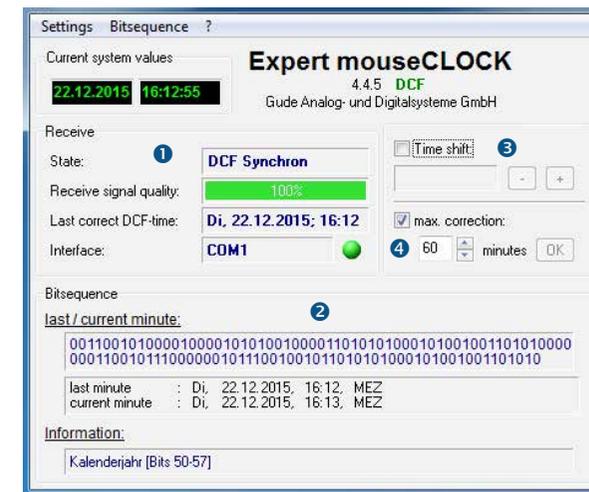

Fig. 1: Interface of Windows software **WinClk**

2.3 Menu Options
Settings
COM port: Choose any COM port , if the desired is not automatically detected.
Synchronize: Choose between *singular* or *regular* (recommended) synchronization of time.
Colors: Adjust the color setting of the software.
Language: Choose the desired language.
Close: Choose the option *Window* or *Program*, if you wish to close the window or program.
Bitsequence
Show or hide bitsequence window.
?
Help: Here you find helpful information on the user interface of **WinClk** software and on **Expert Mouse Clock** Series.
Info: Version information on the deployed **WinClk** sofware.

3. Operations under Linux

Expert Mouse Clock can be run under Unix/Linux by means of the XNTP package. By using XNTP it is possible to build up your own NTP server that polls data from **Expert Mouse Clock** through the COM interface. The retrieved time information is then distributed within the network. More detailed instructions can be found at gude.info/wiki.